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EXAMINER

TRUONG, LOAN

ART UNIT	PAPER NUMBER
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2114

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/824,594	Applicant(s) MIZUTANI ET AL.	
	Examiner LOAN TRUONG	Art Unit 2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to applicant's argument filed January 3, 2007 in application 10/824,594.
2. Claims 1-19 are presented for examination. Claims 1, 3-6, and 8 have been amended. Claims 10-19 are newly added.

Response to Arguments

3. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

4. Claim 8 is objected to because of the following informalities: The amended language "of a plurality of data" is redundant due to the fact that it follow "one of data". Examiner suggests removing the term "of data" preceding the amended limitation to recite "adjustment means for selecting one of data of a plurality of data". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 10-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not

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described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The newly added claims contains the limitation of removal means for removing output data of first and second processing means when said output data are determined to coincide with each other. Applicant's specification does mention discriminating whether or not the orders of the output data coincide with each other (*paragraph 0008, 0010, 0039, 0077*). Furthermore, the adjustment means is disclosed to store, compare (*paragraph 0009-0011*) and re-construct the output data of the second storage means to the first storage means (*paragraph 0013*) but no reference as to what happens to the data after it is determined to coincide or any removal means.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3, 5-11 and 14-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Iselt (US 6,917,582).

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In regard to claim 1, Iselt disclosed an information processing apparatus, comprising:

first and second information processing means for performing the same process in synchronism with each other (*ATM cell stream is split into two redundant data streams that are routed via different paths, fig. 1, col. 3 lines 5-10*); and

adjustment means (*merge the data streams, fig. 1, col. 3 lines 5-20*) for adjusting orders of output data from said first and second information processing means so as to correspond to each other to discriminate whether or not the output data coincide with each other (*fig. 3b-3c, comparison of the two ATM cells leads to an inequality in the pair-by-pair comparison during failure recognition phase, col. 4 lines 43-57 and col. 5 lines 1-16*).

In regard to claim 2, Iselt disclosed an information processing apparatus as claimed in claim 1, wherein said adjustment means includes first storage means for storing the output data of said first information processing means and second storage means for storing the output data of said second information processing means (*Buffer memories P0 and P1 in which ATM cells are written to, fig. 1, P0, P1, col. 5-16*).

In regard to claim 3, Iselt disclosed an information processing apparatus as claimed in claim 2, wherein said adjustment means compares when the amount of output data stored in any one of said first and second storage means reaches a predetermined amount (*ATM cells are always compared over a length of k ATM cells, col. 3 lines 50-55*), the output data of said first information processing means stored in said first storage means and the output data of said second information processing means stored in said second storage means with each other

(Buffer memories P0 and P1 in which ATM cells are written to, fig. 1, P0, P1, col. 5-16) with the output data adjusted in order so as to correspond to each other to discriminate whether or not the output data coincide with each other (fig. 3b-3c, comparison of the two ATM cells leads to an inequality in the pair-by-pair comparison during failure recognition phase, col. 4 lines 43-57 and col. 5 lines 1-16).

In regard to claim 5, Iselt disclosed an information processing apparatus, comprising:
first and second information processing means for performing the same process in synchronism with each other (*ATM cell stream is split into two redundant data streams that are routed via different paths, fig. 1, col. 3 lines 5-10*); and
adjustment means including re-construction means for re-constructing a plurality of output data of said second information processing means based on a plurality of output data of said first information processing means (*merge the data streams, fig. 1, col. 3 lines 5-20*); and
comparison means for comparing the output data of said first information processing means and the output data of said second information processing means re-constructed by said re-construction means with each other (*fig. 3b-3c, comparison of the two ATM cells leads to an inequality in the pair-by-pair comparison during failure recognition phase, col. 4 lines 43-57 and col. 5 lines 1-16*).

In regard to claim 6, Iselt disclosed an information processing apparatus as claimed in claim 5, wherein said adjustment means includes first storage means for storing the output data of said first information processing means and second storage means for storing the output data

of said second information processing means (*Buffer memories P0 and P1 in which ATM cells are written to, fig. 1, P0, P1, col. 5-16*), and said re-construction means (*merge the data streams, fig. 1, col. 3 lines 5-20*) changes the order of the output data of said second information processing means stored in said second storage means based on the order of the output data of said first information processing means stored in said first storage means (*assuming that the trailing data stream D0 has been lost, the leading data stream D1 becomes the merged output, fig. 3b, comparison of the two ATM cells leads to an inequality in the pair-by-pair comparison during failure recognition phase, col. 4 lines 43-57 and col. 5 lines 1-16*).

In regard to claim 7, Iselt disclosed an information processing apparatus as claimed in claim 5, wherein said adjustment means includes first storage means for storing the output data of said first information processing means and second storage means for storing the output data of said second information processing means (*Buffer memories P0 and P1 in which ATM cells are written to, fig. 1, P0, P1, col. 5-16*), and said re-construction means (*merge the data streams, fig. 1, col. 3 lines 5-20*) divides and re-couples the output data of said second information processing means stored in said second storage means based on the output data of said first information processing means stored in said first storage means (*replacing the faulty/missing ATM cell with a corresponding ATM cell taken from an intact, other redundant sub-system, col. 2 lines 52-61*).

In regard to claim 8, Iselt disclosed an information processing apparatus, comprising:

first and second information processing means for performing the same process in synchronism with each other (*ATM cell stream is split into two redundant data streams that are routed via different paths, fig. 1, col. 3 lines 5-10*); and

adjustment means (*merge the data streams, fig. 1, col. 3 lines 5-20*) for selecting one of data of a second output of said second information processing means which corresponds to one of data of a first output of said first information processing means to detect whether or not the data of the first and second outputs coincide with each other (*fig. 3a-3c, comparison of the two ATM cells leads to an inequality in the pair-by-pair comparison during failure recognition phase, col. 4 lines 43-57 and col. 5 lines 1-16*).

In regard to claim 9, Iselt disclosed an information processing apparatus as claimed in claim 8, wherein said adjustment means (*merge the data streams, fig. 1, col. 3 lines 5-20*) includes first storage means for storing the data of the first output of said first information processing means and second storage means for storing the data of the second output of said second information processing means (*Buffer memories P0 and P1 in which ATM cells are written to, fig. 1, P0, P1, col. 5-16*), and said adjustment means (*merge the data streams, fig. 1, col. 3 lines 5-20*) searches said second storage means for one of the data of the second output corresponding to one of the data of the first output of said first information processing means stored in said first storage means (*fig. 3a-3c, comparison of the two ATM cells leads to an inequality in the pair-by-pair comparison during failure recognition phase, col. 4 lines 43-57 and col. 5 lines 1-16*).

In regard to claim 10, Iselt teach an information processing apparatus as claimed in claim 3, wherein said adjustment means (*merge the data streams, fig. 1, col. 3 lines 5-20*) includes removal means (*ATM cells are taken from the buffer memories and supplied to further devices via a path W, col. 3 lines 17-21*) for removing said output data of said first information processing means from said first storage means and said output data of said second information processing means from said second storage means (*Buffer memories P0 and P1 in which ATM cells are written to, fig. 1, P0, P1, col. 5-16*) when said output data of said first information processing means and said output data of said second information processing means are determined to coincide with each other (*the two ATM cells to be compared agree with one another, fig. 3a, col. 4 lines 48-51*).

In regard to claim 11, Iselt teach an information processing apparatus as claimed in claim 10, wherein said output data of said first information processing means and said output data of said second information processing means are removed from said first storage means and said second storage means (*ATM cells are taken from the buffer memories and supplied to further devices via a path W, col. 3 lines 17-21*) when said output data of said first processing means and said output data of said second processing means are determined to coincide with each other .

In regard to claim 14, Iselt teach an information processing apparatus as claimed in claim 6, wherein said adjustment means (*merge the data streams, fig. 1, col. 3 lines 5-20*) includes removal means (*ATM cells are taken from the buffer memories and supplied to further devices via a path W, col. 3 lines 17-21*) for removing said output data of said first information

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processing means from said first storage means and said output data of said second information processing means from said second storage means (*Buffer memories P0 and P1 in which ATM cells are written to, fig. 1, P0, P1, col. 5-16*) when said output data of said first information processing means and said output data of said second information processing means are determined to coincide with each other (*the two ATM cells to be compared agree with one another, fig. 3a, col. 4 lines 48-51*).

In regard to claim 15, Iselt teach an information processing apparatus as claimed in claim 14, wherein said output data of said first information processing means and said output data of said second information processing means are removed from said first storage means and said second storage means (*ATM cells are taken from the buffer memories and supplied to further devices via a path W, col. 3 lines 17-21*) when said output data of said first processing means and said output data of said second processing means are determined to coincide with each other .

In regard to claim 16, Bartels et al., Wikipedia and Galy et al. teach an information processing apparatus as claimed in claim 7, wherein said adjustment means (*merge the data streams, fig. 1, col. 3 lines 5-20*) includes removal means (*ATM cells are taken from the buffer memories and supplied to further devices via a path W, col. 3 lines 17-21*) for removing said output data of said first information processing means from said first storage means and said output data of said second information processing means from said second storage means (*Buffer memories P0 and P1 in which ATM cells are written to, fig. 1, P0, P1, col. 5-16*) when said output data of said first information processing means and said output data of said second

information processing means are determined to coincide with each other (*the two ATM cells to be compared agree with one another, fig. 3a, col. 4 lines 48-51*).

In regard to claim 17, Iselt teach disclosed an information processing apparatus as claimed in claim 16, wherein said output data of said first information processing means and said output data of said second information processing means are removed from said first storage means and said second storage means (*ATM cells are taken from the buffer memories and supplied to further devices via a path W, col. 3 lines 17-21*) when said output data of said first processing means and said output data of said second processing means are determined to coincide with each other .

In regard to claim 18, Iselt teach disclosed an information processing apparatus as claimed in claim 9, wherein said adjustment means includes removal means for removing said output data of said first information processing means from said first storage means and said output data of said second information processing means from said second storage means when said output data of said first information processing means and said output data of said second information processing means are determined to coincide with each other.

In regard to claim 19, Iselt teach an information processing apparatus as claimed in claim 18, wherein said output data of said first information processing means and said output data of said second information processing means are removed from said first storage means and said second storage means (*ATM cells are taken from the buffer memories and supplied to further*

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devices via a path W, col. 3 lines 17-21) when said output data of said first processing means and said output data of said second processing means are determined to coincide with each other .

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
7. Claims 4, 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iselt (US 6,917,582) in further view of Zhang (US 2003,016148).

In regard to claim 4, Iselt does not teach an information processing apparatus as claimed in claim 2, wherein said adjustment means further includes designation means for designating the frequency with which the discrimination is to be performed to a frequency lower than a

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frequency with which the output data of said first and second information processing means are received.

Zhang teach of a synchronous data serialization circuit where the application specific integrated circuit (ASIC) performs the monitoring and error correction functions at the lower frequency (*paragraph 0043*).

It would have been obvious to modify the apparatus of Iselt by adding Zhang synchronous data serialization circuit. A person of ordinary skill in the art at the time of applicant's invention would have been motivated to make the modification because it would established telecommunication standards require the transceiver to perform various functions, including data monitoring and error correction (*paragraph 0043*).

In regard to claim 12, Iselt teach an information processing apparatus as claimed in claim 4, wherein said adjustment means (*merge the data streams, fig. 1, col. 3 lines 5-20*) includes removal means (*ATM cells are taken from the buffer memories and supplied to further devices via a path W, col. 3 lines 17-21*) for removing said output data of said first information processing means from said first storage means and said output data of said second information processing means from said second storage means (*Buffer memories P0 and P1 in which ATM cells are written to, fig. 1, P0, P1, col. 5-16*) when said output data of said first information processing means and said output data of said second information processing means are determined to coincide with each other (*the two ATM cells to be compared agree with one another, fig. 3a, col. 4 lines 48-51*).

In regard to claim 13, Iselt teach an information processing apparatus as claimed in claim 12, wherein said output data of said first information processing means and said output data of said second information processing means are removed from said first storage means and said second storage means (*ATM cells are taken from the buffer memories and supplied to further devices via a path W, col. 3 lines 17-21*) when said output data of said first processing means and said output data of said second processing means are determined to coincide with each other .

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Loan Truong whose telephone number is (571) 272-2572. The examiner can normally be reached on M-F from 8am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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